

IN THE CLAIMS

Please amend the claims as follows. All pending claims, whether or not amended, are presented below for convenience.

1. (Amended) A wafer carrier for supporting a substrate, comprising:

a circular plate having a flat edge region extending around the circumference of said plate;
and

a circular recessed center region having a recessed bottom surface and including an upwardly inclined surface around the periphery of said recessed bottom surface,

wherein the substrate is supported by a portion of the upwardly inclined surface and is spaced apart from said recessed bottom surface such that the substrate is supported by said wafer carrier only around a peripheral edge of the substrate, and

wherein said wafer carrier is comprised of a material having a coefficient of thermal expansion that enables the upwardly inclined surface to maintain contact substantially entirely around the peripheral edge of the substrate during processing at elevated temperatures,

whereby deposition on a backside of the substrate is substantially prevented.

2. (Unchanged) The wafer carrier of Claim 1 wherein said recessed bottom surface further comprises at least one aperture formed therein for receiving at least one support member to engage the substrate.

3. (Unchanged) The wafer carrier of Claim 1 wherein said circular recessed center region has a diameter of approximately 200 mm.

4. (Unchanged) The wafer carrier of Claim 1 wherein said circular recessed center region has a diameter of approximately 300 mm.

5. (Unchanged) The wafer carrier of Claim 1 wherein said upwardly inclined surface is inclined at an angle in the range of approximately 5 to 45 degrees to the plane of the recessed bottom surface.

6. (Unchanged) The wafer carrier of Claim 1 wherein said upwardly inclined surface is inclined at an angle of approximately 10° to the plane of the bottom recessed surface.

8. (Unchanged) The wafer carrier of Claim 1 wherein said wafer carrier is comprised of a material having thermal conductivity in the range of 40 to 70 W/m/K.

9. (Unchanged) The wafer carrier of Claim 1 wherein said wafer carrier is comprised of a material selected from the group of silicon carbide, aluminum nitride, large-grained polycrystalline silicon and silicon/silicon carbide alloy.

10. (Unchanged) The wafer carrier of Claim 1 wherein the wafer is spaced apart from said recessed bottom surface by a distance of approximately 0.15 to 0.5 mm.

11. (Unchanged) The wafer carrier of Claim 1 wherein the wafer is spaced apart from said recessed bottom surface by a distance of approximately 0.25 mm.

12. (Unchanged) The wafer carrier of Claim 1 wherein said flat edge region has a width of approximately 5 to 25 mm.

24. (Added) The wafer carrier of Claim 1 wherein said material of the wafer carrier comprises an isotropic coefficient of thermal expansion in the range of 2.6×10^{-6} to $5 \times 10^{-6}/^\circ\text{C}$.

25. (Added) A wafer carrier for supporting a substrate comprising:

a circular plate having a flat edge region extending around the circumference of said plate;
and

a circular recessed center region having a recessed bottom surface and including an upwardly inclined surface around the periphery of said recessed bottom surface,

wherein the substrate is supported by a portion of the upwardly inclined surface and is spaced apart from said recessed bottom surface such that the substrate is supported by said wafer carrier only around a peripheral edge of the substrate, and

wherein said wafer carrier comprises a material having an isotropic coefficient of thermal expansion in the range of 2.6×10^{-6} to $5 \times 10^{-6}/^{\circ}\text{C}$.

26. (Added) The wafer carrier of Claim 25 wherein said substrate comprises a material having a coefficient of thermal expansion in the range of 2.6×10^{-6} to $5 \times 10^{-6}/^{\circ}\text{C}$.

27. (Added) The wafer carrier of Claim 25 wherein said material of the substrate comprises a material having a coefficient of thermal expansion substantially equal to that of the wafer carrier.

28. (Added) The wafer carrier of Claim 25 wherein said material of the substrate comprises an isotropic coefficient of thermal expansion.